In the claims:

28. **(Currently Amended)** A nucleic acid encoding a chimeric polypeptide comprising serum albumin protein (SA) having a biologically active peptide ~~sequence~~ inserted into at least one region selected from residues 360-369 and residues 450-463, optionally replacing one or more residues of the region into which it is inserted, wherein said peptide ~~sequence is~~ (i) is heterologous to said serum albumin protein and (ii) interacts with a living organism to induce a change in a biological function of the organism or any part of the organism.

29. **(Previously Presented)** A delivery vector comprising the nucleic acid of claim 28, 49, or 50.

30. **(Previously Presented)** The delivery vector of claim 29, wherein said delivery vector comprises a virus or retrovirus.

31. **(Previously Presented)** The delivery vector of claim 30, wherein said virus or retrovirus is selected from adenoviruses, adeno-associated viruses, herpes simplex viruses, human immunodeficiency viruses, or vaccinia viruses.

32. **(Previously Presented)** Transfected cells comprising target cells which have been exposed to the delivery vector of claim 29.

33. **(Previously Presented)** The transfected cells of claim 32, wherein the cells are selected from blood cells, skeletal muscle cells, stem cells, skin cells, liver cells, secretory gland cells, hematopoietic cells, or marrow cells.

34. **(Previously Presented)** A pharmaceutical preparation comprising a pharmaceutically acceptable excipient and the chimeric polypeptide encoded by the nucleic acid of claim 28, 49, or 50.

35-48. **(Canceled)**

49. **(Currently Amended)** A nucleic acid encoding a chimeric polypeptide having the structure A-B-C, wherein:

A represents an N-terminal peptide fragment of serum albumin (SA) terminating in an amino acid corresponding to one of residues 359-368;

B represents a biologically active peptide ~~sequence~~; and,

C represents a C-terminal peptide fragment of SA beginning from an amino acid corresponding to one of residues 361-370;

wherein A and C do not include overlapping portions of the regions 360-369 and 450-463, and wherein said peptide ~~sequence~~ is (i) heterologous to said serum albumin; and (ii) interacts with a living organism to induce a change in a biological function of the organism or any part of the organism.

50. (**Currently Amended**) A nucleic acid encoding a chimeric polypeptide having the structure A-B-C, wherein:

A represents an N-terminal peptide fragment of serum albumin (SA) terminating in an amino acid corresponding to one of residues 449-462;

B represents a biologically active peptide ~~sequence~~; and,

C represents a C-terminal peptide fragment of SA beginning from an amino acid corresponding to one of residues 451-464;

wherein A and C do not include overlapping portions of the regions 360-369 and 450-463, and wherein said peptide ~~sequence~~ is (i) heterologous to said serum albumin; and (ii) interacts with a living organism to induce a change in a biological function of the organism or any part of the organism

51. (**Currently Amended**) The nucleic acid of claim 28, 49 or 50, wherein said peptide ~~sequence~~ comprises a fragment of an angiogenesis-inhibiting protein or polypeptide.

52. (**Previously Presented**) The nucleic acid of claim 51, wherein said angiogenesis-inhibiting protein or polypeptide is selected from angiostatin, endostatin, and peptide fragments thereof.

53. (**Currently Amended**) The nucleic acid of claim 28, 49 or 50, wherein said peptide ~~sequence~~ binds to a cell surface receptor protein.

54. (**Previously Presented**) The nucleic acid of claim 53, wherein the receptor protein is a G-protein coupled receptor.

55. (**Previously Presented**) The nucleic acid of claim 53, wherein the receptor protein is a tyrosine kinase receptor.

56. (**Previously Presented**) The nucleic acid of claim 53, wherein the receptor protein is a cytokine receptor.

57. (**Previously Presented**) The nucleic acid of claim 53, wherein the receptor protein is a MIRR receptor.

58. (**Previously Presented**) The nucleic acid of claim 53, wherein the receptor protein is an orphan receptor.

59. (**Previously Presented**) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide binds to an extracellular receptor or an ion channel.

60. (**Previously Presented**) The nucleic acid of claim 59, wherein the chimeric polypeptide is an agonist of said receptor or ion channel.

61. (**Previously Presented**) The nucleic acid of claim 59, wherein the chimeric polypeptide is an antagonist of said receptor or ion channel.

62. (**Previously Presented**) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide induces apoptosis.

63. (**Previously Presented**) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide modulates cell proliferation.

64. (**Previously Presented**) The nucleic acid of claim 28, 49 or 50, wherein the chimeric polypeptide modulates differentiation of cell types.

65. (**Currently Amended**) The nucleic acid of claim 28, 49 or 50, wherein said peptide ~~sequence~~ comprises between 4 and 400 residues.

66. (**Currently Amended**) The nucleic acid of claim 28, 49 or 50, wherein said peptide ~~sequence~~ comprises between 4 and 200 residues.

67. **(Currently Amended)** The nucleic acid of claim 28, 49 or 50, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

68. **(Currently Amended)** The nucleic acid of claim 28, 49 or 50, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.

69. **(Previously Presented)** The nucleic acid of claim 28, 49 or 50, wherein the tertiary structure of the chimeric polypeptide is similar to the tertiary structure of native SA.

70. **(Currently Amended)** The nucleic acid of claim 28, wherein the inserted peptide ~~sequence~~ replaces a portion of native SA sequence.

71. **(Currently Amended)** The nucleic acid of claim 70, wherein the inserted peptide ~~sequence~~ and the replaced portion of native SA sequence are of unequal length.

72. **(Previously Presented)** The nucleic acid of claim 28, 49 or 50, wherein the half-life of the polypeptide in the blood is no less than 14 days.

73. **(Previously Presented)** The nucleic acid of claim 28, 49 or 50, wherein the half-life of the polypeptide in the blood is no less than 10 days.

74. **(Previously Presented)** The nucleic acid of claim 28, 49 or 50, wherein the half-life of the polypeptide in the blood is no less than 50% of the half-life of native SA.

75. **(Currently Amended)** A nucleic acid encoding a chimeric polypeptide comprising serum albumin (SA) having at least two biologically active ~~peptide sequences~~ peptides inserted therein, wherein at least one biologically active peptide ~~sequence~~ is inserted (i) between an N-terminal SA sequence ending in one of residues 359-368 and a C-terminal SA sequence beginning from one of residues 361-370; or (ii) between an N-terminal SA sequence ending in one of residues 449-462 and a C-terminal SA sequence beginning from one of residues 451-464; wherein the N- and C-terminal sequences do not include overlapping portions of the regions 360-369 and 450-463, wherein said at least two biologically active ~~peptide sequences~~ peptides are (i) heterologous to said serum albumin; and (ii) interact with a living organism to induce a change in a biological function of the organism or any part of the organism.

76. (**Currently Amended**) The nucleic acid of claim 75, wherein said ~~peptide sequences~~ peptides are identical.

77. (**Currently Amended**) The nucleic acid of claim 75, wherein said ~~peptide sequences~~ peptides comprise distinct sequences of a protein.

78. (**Currently Amended**) The nucleic acid of claim 75, wherein said ~~peptide sequences~~ peptides comprise sequences from at least two different proteins.

79. (**Previously Presented**) The nucleic acid of claim 28, 49 or 50, wherein said biologically active peptide is the myc epitope or the RGD peptide.

80. (**Currently Amended**) The nucleic acid of claim 28, 49, or 50, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

81. (**Currently Amended**) The delivery vector of claim 29, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

82. (**Currently Amended**) The transfected cells of claim 32, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

83. (**Currently Amended**) The pharmaceutical preparation of claim 34, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

84. (**Currently Amended**) The nucleic acid of claim 51, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

85. (**Currently Amended**) The nucleic acid of claim 70, 71, 75, 76, 77, or 78, wherein said peptide ~~sequence~~ comprises between 4 and 100 residues.

86. (**Currently Amended**) The nucleic acid of claim 28, 49, or 50, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.

87. (**Currently Amended**) The delivery vector of claim 29, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.

88. **(Currently Amended)** The transfected cells of claim 32, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.

89. **(Currently Amended)** The pharmaceutical preparation of claim 34, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.

90. **(Currently Amended)** The nucleic acid of claim 51, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.

91. **(Currently Amended)** The nucleic acid of claim 70, 71, 75, 76, 77, or 78, wherein said peptide ~~sequence~~ comprises between 4 and 20 residues.